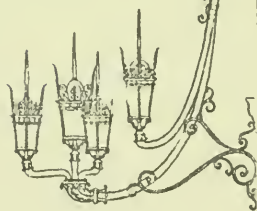


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LAND UTILIZATION
AND MARKETABILITY
South Cove Urban Renewal Project

Prepared for

BOSTON REDEVELOPMENT AUTHORITY

March 1965

by

Robert Gladstone & Associates
Economic Consultants
Washington, D.C.



South Cove
G451 L



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FOREWORD

This report summarizes our analysis of land use and marketability for the South Cove urban renewal area R-92. Work undertaken in this study is in performance of a contract with the Boston Redevelopment Authority, dated October 8, 1964.

Findings and recommendations in the analysis are based on examination of area-wide as well as Boston core area economic and market factors. Background trends and future development patterns indicated for the central area as well as the South Cove project have been taken into account. Overall findings of the study indicate that key residential and commercial parcels should be readily marketable for the uses proposed within a reasonable period following project execution. Public and institutional re-uses should also find ready acceptance by specific potential users and enhance overall project environment and markets for parcels to be privately developed. Support for these findings is presented in full detail in the report which follows.

Highlights of the analysis are presented on the following page. Project background considerations are reviewed in Section A. Section B outlines specific market factors relating to all major project uses proposed -- residential, commercial as well as public and institutional. In Section C, preliminary re-use valuations by parcels are set forth. Maps showing the project, disposition parcels and the surrounding area are included at various points in the text.

During the course of work for this study, individuals in governmental agencies as well as in private organizations were of great assistance in furnishing useful information and specific data. We would like to acknowledge this help so received, particularly from the planning staff of the Tufts-New England Medical Center. Full responsibility for interpretation and application and materials included in the report however, is assumed by this firm.

Robert Gladstone & Associates
Washington, D. C.
March, 1965

HIGHLIGHTS OF FINDINGS

I. Based on our analysis of overall area potentials and disposition parcel marketability in the South Cove renewal project, we find that key residential and commercial parcels would be marketable, developed according to patterns, staging and timing as set forth below.

A. Seven residential parcels in two principal categories would be marketable on the following basis:

1. Approximately 250, sub-market rate 221d3 units in walk-up and medium-rise elevator structures can be appropriately developed on parcels R-1;2-2a; and 3-3a.
 - a. The market for 221d3 units in central Boston areas is substantial, aggregating an estimated 11,000 units per year in overall potential.
 - b. The total Boston d3 program should average approximately 1,700 units per year during the next few years -- only a small fraction of the total market potential in the area.
 - c. The South Cove d3 units are advantageously located and, together with the 500 units proposed in Castle Square, offer a uniquely accessible, center-city location for this type of unit.
 - d. Based on the modest share of the overall d3 market sought here and the small share of "eligible" renters in the market, that the total d3 program would seek, coupled with the special advantages of the South Cove location in relation to existing and possible future competition, the 250 units proposed should be readily marketable.
 - e. Staging and timing for these units should be based on availability of cleared ground in a suitably upgraded environment, inasmuch as the tenant potentials are already available in the market place for this offering.

2. A total development of some 600 units on parcels R-4-5-6 and 7 could appropriately be developed as 220 development or 221 d4 geared to minimum rent ranges. We would recommend monthly rent per room targets in the low \$30 range (including all utilities except electricity) and with a low average room count. The resulting rents among studios and one bedroom units for example, might average \$115 to \$125; and \$140-150 per month respectively per unit. This development can be designed in a mix of high-rise elevator structures, perhaps twenty stories in height; and walk-up buildings.

- a. The market for the recommended units in the indicated rent ranges is substantial in central Boston locations we estimate, totaling an estimated 2,500 units per year in all.
- b. Developed on a staged basis, a South Cove offering at the rate of 200 units per year -- spread the total development over a three year period -- would attempt to "claim" only a small fraction of the total market potential available in the area.
- c. Based on the locational advantages as well as the strong, immediately proximate supporting markets, including the medical center, we believe the indicated share of the market should be readily attainable.

- B. Commercial re-uses on seven major parcels are recommended for South Cove in terms of several specialized types of development as follows:

1. The Central Plaza - Community Services grouping located in the heart of the project area should be used primarily to meet everyday convenience needs -- including restaurants -- of the project area residents, day-time population and visitors on parcel C-1; as well as providing possible expansion room for the existing Charles Playhouse adjacent to parcel C-2.
- a. Chief markets supporting the community services grouping would be the extensive tributary area population expected following completion of project, totaling in excess of 2,000 households resident in the area; a day-time population based at the medical center alone in excess of 3,000 staff members and 1,700 students at the outset; the MBTA transit station on the public plaza directly adjacent to this complex; immediately adjacent theater and entertainment areas; and existing business in the area to be displaced under the plan.

- b. The total 25,000 square foot ground area -- 12,000 for Parcel C-1 -- would provide accommodations within the envelope created by an FAR 8 sufficient to accommodate only a modest overall development in relation to the demand indicated here. We believe these parcels can be readily marketed at this location early in project development.
2. General commercial uses; offices; specialized fringe area retail; and offstreet parking facilities are proposed for development on parcels C-3-4-5 and 6. We find that these parcels would be readily marketable for the variety of uses indicated based on proximity to the medical center, the south sections of the central business district and the Park Square-Back Bay activity centers. South Cove locations provide ample opportunity for selected offices and upper story uses related to these nearby activities as well as ground floor retail and commercial activities related to passing pedestrian and vehicular traffic. Finally, indicated demand for offstreet parking spaces serving South Cove needs as well as adjacent areas is substantial. Estimates by the T-NEMC planning office indicates a total requirement for 2,500 offstreet parking spaces by 1985 and an independent estimate prepared by Barton-Ashman Associates, BRA traffic and parking consultants for this project, projects a deficit of 1,500 spaces within the area under the plan as drawn.
3. On parcel C-7, an existing 140,000 square foot building, occupied by Prudential before completion of their new Back Bay Center, will remain. This space could appropriately be used for general-occupancy offices by users requiring large areas of centrally-located space with less than top-grade rentals. We believe this building, selectively renovated in response to specific tenant demands, should be marketable over a reasonable period of time to general-purpose users as well as semi-public organizations and institutions.

II. Preliminary re-use valuations for the principal disposition parcels -- prepared as guidelines for planning purposes rather than as formal re-use appraisals -- can be summarized in overall terms as follows:

- A. Public and institutional re-use parcels would range from a low of \$0.45 to a high of \$7.00 in value on a unit square foot basis, according to location, shape, size, alternate use and similar factors.

- B. Residential parcels for the indicated 221d3, minimum 220 or 221d4 programs would range from \$0.20 to \$1.55 based on square footage values for d3 estimated at \$0.20 to \$0.30 per square foot and for 220 up to the \$1.55 high.
- C. Commercial uses would develop values in the \$1.50 to \$10.00 range per square foot according to location, shape and use.



Figure I

SOUTH COVE PROJECT AND VICINITY

LAND UTILIZATION AND MARKETABILITY

South Cove Urban Renewal Project

Section A. Project Background

South Cove lies immediately south of the Central Business District retail and entertainment sections; Park Square commercial area; the garment district and financial center; and Chinese commercial. Its principal boundaries on the south and east are expressways -- the Mass Turnpike and Central Artery. Immediately on the south of the Turnpike, the extensive South End residential and industrial area begins. Shawmut and Tremont Streets and the Forest Hills rapid transit line, running through South Cove in a north-south direction, connect across the turnpike directly into the Castle Square Urban Renewal residential area.

Although containing a total of only 96 acres, the project area contains many diverse activities and land uses characteristic of central city sections. Included among these are:

- Specialty residential for ethnic as well as run-of-the-market groups;
- Motion picture distribution and theatre supply houses;
- Hospital, health service, research and medical center facilities;
- Public elementary and private technical school at the secondary level;
- Office and retail facilities;
- Theatres, movie houses;
- Restaurants, miscellaneous eating and drinking places;
- Semi-public facilities and institutions;
- Off-street parking;

Linking South Cove to other central city sections is an extensive street and public transportation system. The primary vehicular routes include the Central Artery-Southeast Expressway and Mass Turnpike. In the future, these facilities will be supplemented by the inner-loop freeway, also to be constructed in the vicinity of the project area. Key conventional streets include Broadway, Tremont, Shawmut, Washington, Columbus and Stuart-Kneeland. These thoroughfares link with other major routes in the central section, providing direct and easy connections to all parts of the metropolitan area from South Cove.

Additional access to the area is via the MBTA rapid transit line to the Forest Hills. At the present time however, station stops along this line are only located at Boylston-Essex Street and Dover Street several blocks north and south of the project area, respectively.

As it presently stands, the area has a number of substantial strengths. It also has a number of important weaknesses, however. Both are critically related to potential marketability for project ground. Before going on to specific renewal proposals for the area, existing pluses and minuses are first reviewed immediately below.

Project Advantages

The strong points in South Cove not only support the long-term stability but also help establish the marketability of selected disposition parcels and the range of development opportunity in this area. Principal strengths can be listed and briefly summarized as follows:

1. Location. Proximity to the heart areas of the city and immediately adjacent to key sectors in downtown and Back Bay.
2. Accessibility. "Cornering" directly on two of the top freeways serving Central Boston -- the Turnpike and Central Artery -- these roads are supplemented by an extensive system of major thoroughfares in and around South Cove. Forest Hills transit line also provides nearby rapid transit service.
3. Tufts-New England Medical Center. Key units in a hospital-health services complex in this area have combined to form the T-NEMC. This substantial health and research facility presently employs nearly 3,000 persons. Substantial expansion in the period ahead is programmed. A new construction effort involving approximately \$70 million is anticipated in the next 20 years. As a result of this expansion, the present staff, visitor, patient and student loads are expected to substantially multiply.
4. Bay Village Residential. The "townhouse" type lower-density residential area situated at the project's west end has demonstrated remarkable vitality in recent years. Extensive private rehabilitation has already taken place, substantially upgrading these homes without the benefit of any specific public action. Providing homes

for some 370 families of the more than 1,700 in South Cove at the present time, this section is one of the few, potentially family-oriented sections within the core area which might provide a resource for middle income ownership units.

5. Chinese Community. Traditionally, the eastern section of the South Cove project area has provided residential accommodations for members of Boston's Chinese community. A long established pattern of settlement plus the structure of the community's enterprise -- focused in the adjacent "China Town" commercial section -- has and continues to attract residents to this area. There have been substantial inroads into the Chinese-occupied housing stock, first by the Central Artery and more recently by the Mass Turnpike however. According to members of the Chinese community, these displacees definitely wish to return to suitable housing here.
6. Don Bosco. This is the only Catholic vocational school in metropolitan Boston at the present time. Acquired some years ago by the Church, at present the student body totals some 600, drawing from the entire area. The school plans a substantial expansion for this operation, hoping to double the size of its present enrollment, in addition to improving the caliber of its present facilities.
7. Entertainment Facilities. Major elements of the downtown entertainment complex including legitimate theatres, movie houses, restaurants as well as other eating and drinking places are located in South Cove. With some exceptions, discussed below, these facilities provide convenient and attractive uses which add to the area-wide attractions of this project.

Area Weaknesses

In addition to strong points in the project area, a number of minus factors are present. Potentially affecting long-term stability and project site marketability, the weak points however, have been taken into account in project development. Briefly, the specific points and proposed project remedies can be listed as follows:

1. Honky Tonk Bars. Nearly 45 bars, taverns and clubs are located in the project area at present. Situated principally along existing Tremont Street, a number of these attract undesirable elements to the area. Most of these bars would be eliminated as a result of project actions.

2. Structural Condition. A substantial fraction of the area's total structures are now dilapidated or in unsound condition. These require rehabilitation or repair and in some cases, demolition and replacement. The total number of residential and commercial structures in the area at the present time is 545. Of these, 385 are in "unfit" condition. Of the 300 existing residential structures, some 75 percent are unfit. The 180 commercial structures are reported as 65 percent unfit. Project actions will eliminate virtually all of the most seriously blighted structures.
3. Street Pattern. A substantial proportion -- about 45 percent -- of the project area's total ground is now taken up by street rights-of-way. Two separate grid street systems intersect in South Cove, creating difficult and, in some instances, nearly unworkable circulation. The project plan proposes to improve these conditions -- especially those affecting major traffic flows. This includes particularly the separation of the Shawmut and Tremont street movements, tying Charles Street-Broadway into Tremont on the South. Other improvements are principally in the form of widenings and intersection modifications.
4. Open Land. Major parcels in project area are presently vacant or unbuilt upon. Most of this unimproved land is now in use for surface parking. Some of it -- especially in the southeasterly section of the project -- is idle. The project plan proposes to intensify the area's development patterns as well as replacing obsolete buildings with new activities.
5. Rapid Transit. The present Forest Hills line is elevated as it cuts through South Cove and does not provide for a stop within the project area. The proposed plan calls for a new station on a re-aligned route at the center of the project, adjacent to the enlarged Tufts-New England Medical Center and a public plaza area extending from Shawmut to Tremont. The elevated structure -- a blight on adjacent activities -- will also be removed as part of an overall program for improvement of the Southside rapid transit services. These are being analyzed under a comprehensive program of analysis for the entire Southeast corridor. The Forest Hills route has been proposed for extension to Readville and Route 128 on the South. The final report on the study is due to be completed this spring and it is expected that reconstruction of the Forest Hills line might be underway within 18 months thereafter or approximately by the Fall of 1966. A portion of the project redevelopment will

already have been begun by that time -- according to present schedules. The EI would be removed however, prior to completion of the project as well as the improvement of the sections immediately adjacent to the existing line.

6. School and Playground Facilities. The existing Quincy Elementary School presently serving South Cove is perhaps one of the oldest in the entire city. A new 300-500 pupil elementary school is proposed as a replacement for Quincy. Located on approximately a two acre site, the school will be provided not only with an upgraded building but also more adequate outdoor recreation space. Now under discussion is a co-operative program for special curriculum supplements supported by the Tufts School of Education. In addition to the school, a public open space plaza is to be provided at the center of the project.

Project Proposals

The redevelopment plan for the project area responds to the needs and development opportunities in South Cove. Specific action is called for to underpin and extend existing strengths; as well as reduce weaknesses in the area. The principal measures proposed can be summarized as follows:

- Provide approximately two acres of horizontal expansion room for the T-NEMC activities, consolidating their already extensive holdings in the area by a series of exchanges and property adjustments. Portions of the T-NEMC facilities -- especially along Stuart-Kneeland -- will be used in part to accommodate private commercial activities, at least until such time as the Medical Center requires the space for its own activities and expansion.
- Provide for expansion and consolidation for the Don Bosco technical high school.
- Provide for possible expansion of the existing repertory theatre company -- Charles Playhouse.
- Provide central retail facilities to serve the convenience needs of daytime and resident populations in the project area.
- Create a public plaza at the center of the project area, adjacent to proposed commercial facilities and new MBTA station bringing the project area to a central focus.

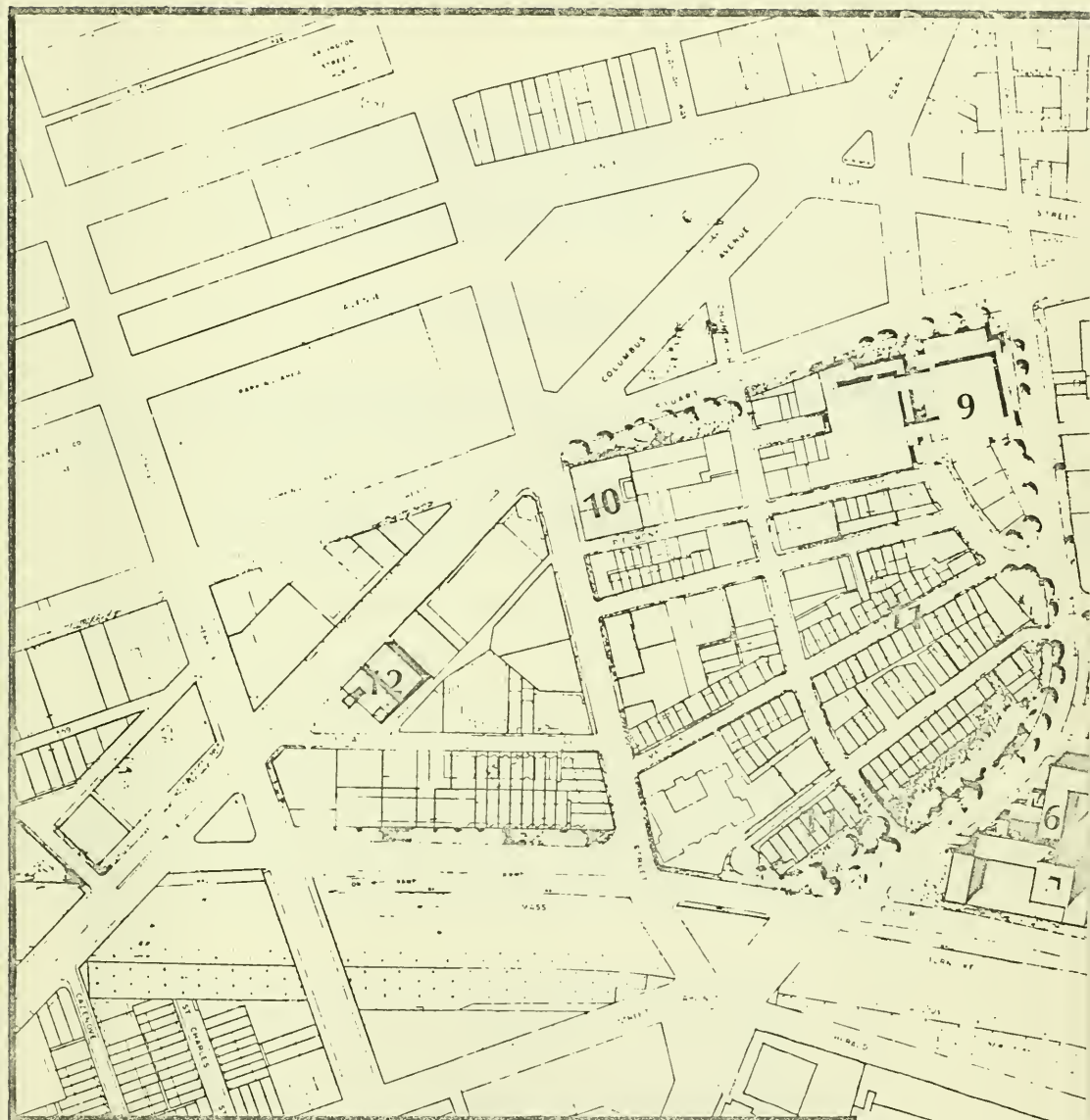
- Create sites for new residential units serving the Chinese community and T-NEMC needs as well as broader central area markets.
- Develop new public school and park facilities.
- Eliminate objectionable bars along Tremont.
- Improve off-street parking facilities.
- Provide for various institutional and public uses including fire station, churches and similar activities.
- Selectively expand and rebuild area commercial facilities along Stuart-Kneeland.

Disposition Parcels. Specific market support available for the proposed renewal actions is discussed in further detail in the next section. The disposition parcels, ground areas and planned uses, following-up the program proposed can be seen in Table 1, below.

Table 1. PRINCIPAL DISPOSITION PARCELS, SOUTH COVE PROJECT

<u>A. Public and Institutional</u>	<u>Area (Sq. Ft.)</u>	<u>Intended Use</u>
P-1	16,926	Community Center
P-2; P-2a; P-3; P-3a; P-4; P-4a;	52,710	Medical & Housing
P-5; P-6; P-7; P-8; P-9; P-10; P-11	78,724	Medical & Commercial
P-12; P-12a; P-12b	67,600	Technical High School
P-13	81,000	Elementary School
P-14; P-14a	28,200	Public Open Space
P-15	26,500	Church
P-16	19,408	Fire Station
Total	<u>371,068</u>	
<u>B. Residential</u>		
R-1	19,335	Housing
R-2; R-2a	122,300	Housing
R-3; R-3a	97,800	Housing
R-4	23,200	Housing
R-5	101,600	Housing
R-6; R-6a	11,943	Housing
R-7; R-7a; R-7b	18,100	Housing
Total	<u>394,278</u>	
<u>C. Commercial</u>		
C-1; C-2	25,000	Restaurants & Theatres; Retail
C-3; C-3a; C-3b	75,000	Parking, Retail & Office
C-4; C-5; C-6	29,008	Parking, Retail & Office
C-7	26,841	Offices
Total	<u>155,849</u>	

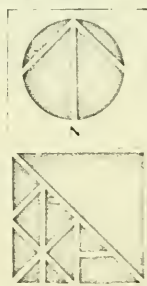




- 1 NEW CHINESE HOUSING
- 2 MEDICAL CENTER
- 3 WILBUR METROPOLITAN
- 4 DON BOSCO
- 5 NEW QUINCY SCHOOL
- 6 NEW HOUSING
- 7 PUBLIC PARK
- 8 BRADFORD HOTEL
- 9 NEW COMMERCIAL
- 10 BOSTON GAS CO BLDG
- 11 BAY VILLAGE
- 12 NEW FIRE STATION

FIGURE 2
Illustrative Site Plan

South Cove
Urban Renewal
Area R-92



LAND UTILIZATION AND MARKETABILITY

South Cove Urban Renewal Project

Section B. Market Factors

The South Cove disposition program calls for four classes of parcels according to type of purchaser and intended re-use. Included are the following two categories which would be in "public" or "semi-public" ownership:

1. Circulation and vehicular rights-of-way;
2. Development parcels for various public uses; semi-public and institutional facilities.

In addition, two categories of private development parcels are indicated. These are as follows:

1. Commercial facilities;
2. Residential uses of various types.

Markets for the "public" parcels cannot be established in the usual framework -- considering the interaction of supply and demand factors. Specific comments on these parcels however, in terms of intended uses; potential purchasers; and relationship to overall renewal plan are included below. Subsequently, analysis of markets and marketability for each of the private development parcels is outlined. Estimated re-use value ranges for all project disposition parcels are set forth in the final section of this report.

The selection and extent of land uses and renewal action proposed for the project was based on South Cove area needs and plan objectives as established by the BRA staff. These needs grew in part from requirements of key institutions in the area; support needs for other existing activities remaining in the area; area-wide circulation needs; and elimination of blighting influences. The proposed private development uses were similarly evaluated, supplemented by an analysis of area development opportunities by this consultant.

"Public" Uses

Each of the public and institutional parcels previously listed in Table 1 is associated with a specific, prospective purchaser and a specific use directly related to the proposed redevelopment plan. Parcels, prospective purchasers and planned re-use for the 371,000 square feet in "public" activities can be summarized as follows:

Table 2. RE-USE AND DISPOSITION PROGRAM, SOUTH COVE PROJECT

<u>Parcel</u>	<u>Prospective Purchaser</u>	<u>Planned Development</u>
P-1	Chinese Community Organization	Community Center Facilities
P-2; P-2a	T-NEMC	Medical & Research Facilities
P-3; P-3a	T-NEMC	Married Students Housing
P-4; P-4a	T-NEMC	Medical Facilities & Married Students Housing
P-5; P-6; P-7; P-8	T-NEMC	Medical Center Treatment & Research Facilities; Interim & Related Commercial
P-9; P-10; P-11		
P-12; P-12a; P-12b	The Salesian Society	Expansion of Don Bosco Technical School
P-13	City of Boston School Department	Elementary School
P-14; P-14a	City of Boston Park Department	Public Square Open Space
P-15	Morgan Memorial	Church of All Nations & Related Facilities
P-16	City of Boston Fire Department	Fire Station

Circulation and Right-of-Way Takings. Street and circulation takings would be directly disposed to the City of Boston for right-of-way use. There would, we understand, also be some street closing offsets against these rights-of-way dispositions which would be sold for private purposes or used for pedestrian ways.

A number of excess parcels from street takings would remain throughout the project area, we understand. In all instances, these parcels would be made available to contiguous property owners or alternatively used for park or open space, scattered throughout the project area.

Residential Development

A total of seven residential parcels are proposed for disposition in South Cove. Located principally along the east and south edges of the project, these parcels are numbered R-1 through R-7. Some of the parcels, R-2, R-3, R-5, R-6 and R-7, are divided into separate parts, although they are best analyzed as a single unit.

In addition to these residential parcels, two institutional parcels previously discussed -- P-3 and P-3a -- are intended for married students housing for T-NEMC. Further comments on these units are included in a subsequent paragraph.

The seven residential parcels, containing approximately 394,000 square feet of ground area, are the largest allocation of re-uses proposed for the project area, leading even the substantial public and institutional areas programmed. The residential total is more than twice the commercial area proposed for the project.

The residential parcels fall into four main categories with two primary market orientations -- sites for the Chinese community and general market offerings. Apart from married students housing proposed on parcels P-3 and P-3a, no other residential uses are proposed either directly or indirectly in the project area.

In tabular form, the disposition sites, market orientation and approximate parcel size can be summarized as follows:

Parcel Number	Market Orientation	Approximate Size	
		Square Feet	Acres
1. R-1; R-2-2a	Chinese community	142,000	3.3
2. R-3-3a	General Market Offerings	98,000	2.2
3. R-4; R-5	General market offering	125,000	2.9
4. R-6, R-6a R-7-7a-7b	General market offering	30,000	0.7

In the case of each of the key types of residential offerings set forth above, the market support available for the proposed units can be established. The focus for analysis of support is the specific housing type proposed in physical terms; financing technique; and economic characteristics. In addition to the general market support for the housing proposed however, a number of specialized markets would also significantly contribute to marketability of the housing proposed. All these factors are analyzed in further detail in subsequent paragraphs. Before proceeding to this analysis however, development proposals and timetable anticipated for housing programmed at these sites are first examined.

Recommended Programs and Timing

The basic assets available in the South Cove area provide strong development potentials for housing. Location, accessibility, proximity to specialty markets in the downtown, medical center, Chinese community and other sources of demand are key factors in the potential for acceptance of newly constructed units at this location. The urban renewal plan not only extends and strengthens the existing sources of demand for housing in the project, but would eliminate specific detrimental factors in the area, substituting facilities to enhance area livability for residential purposes.

Even apart from the above -- taking into account the full spectrum of close-in housing requirements -- South Cove has a key role to play in Central Boston. This area offers one among a highly limited number of sites for middle-income housing in the Downtown. The West End Project offers upper income rental accommodations. The Waterfront, by and large, will also be upper income in its orientation -- although some low-rise middle-income units have been proposed for sections adjacent to old West End. Residential offerings in the Downtown and Central Business District projects -- including the First Realty offering on Tremont Street now under construction -- will almost certainly be upper middle or upper income in market orientation.

In the existing stock, Beacon Hill units are virtually completely priced-out of the middle income family market. In Back Bay sections close to the Downtown, new construction is reaching for the high-priced market. Existing units -- excepting rooming houses perhaps -- are also increasingly higher priced. Although existing stock and even the newer d3 offerings in the South End; Upper Roxbury; and Washington Park are available to the middle income market, these sections are uniformly more remote to the Core area than the South Cove area.

Not only is the indicated demand for middle-income units in South Cove strong, but the provision of new middle-income stock at this location relates well to the overall distribution of proposed new construction in the central city in the period ahead. However, critical factors of program delineation; appropriate scheduling and staging; and precise market orientation must be resolved to insure success for South Cove housing. These points are discussed in more specific detail immediately below.

Staging and Sequence. South Cove housing can appropriately be developed in a staged sequence so that the various programs relate satisfactorily to their potential market support. Phasing recommended, together with the specific program orientation for each of the major residential parcel groups, can be set forth as follows:

1. Chinese Community. Two major parcels containing slightly more than three acres, or 142,000 square feet in total, are scheduled for the Chinese community area. We would recommend that these units be developed under the 221d3 sub-market rate program in a mixture of townhouse or walk-up garden units and elevator structures of medium-rise height -- six or seven stories. Our understanding is that it would be possible to produce even the elevator units under the d3 program within the recently increased statutory limits for this section of the Housing Act.

Rents based on the Washington Park performance in the walk-up units might run from \$75 through \$105 per month per unit, exclusive of utilities, for one-bedroom through four bedroom units. Rents in the elevator structure might be five to ten dollars higher for the same unit types provided. However in the elevator building, the apartment mix might be skewed toward a lower room count with no three's or four's provided. In the low-rise units one bedroom apartments might be eliminated and only two through four count units included. This program would be similar in overall mix and type to the preliminary proposals for Castle Square, located immediately to the south of Mass Turnpike across from the South Cove site.

The total "holding capacity" of units on these sites would be approximately 150 units -- an average of 50 to the acre. This density appears reasonable and attainable under the d3 program with the mix of structure dwelling types suggested above. We believe the schedule for development for the Chinese community offerings can proceed as rapidly as ground can be made available. There is no significant market or marketability factor with respect to the sites involved which should hinder early re-development and prompt marketing. On the contrary, two factors suggest that early staging of the Chinese Community development would be specifically helpful. First is the ready availability of substantially vacant land for the proposed residential uses. Second is the need and pressure for relocation housing by the Chinese community.

2. General Market Offering (R-3-3a). The total site area in R-3 and 3a is approximately 98,000 square feet, or about 2.2 acres. We would recommend that these sites be developed in a unit type and mix similar to that previously recommended for the Chinese community on R-1 and R-2. At the same unit yield of 50 apartments per acre in walk-up and medium-rise structures, the dwellings which could be accommodated on this site would total 100 units. Financing program for these units should also be similar to those in the Chinese community -- handled under the 221d3 sub-market program. The rent and economic level for these units consequently, would be as previously discussed.

Appropriate timetable for development here would be contingent in substantial measure on elimination of the elevated Forest Hills MBTA line which cuts through the western portion of the site. However, because development conditions on the eastern end of the site are appropriate for early development, we would suggest that the program here be staged with earlier phases occurring along Harrison Avenue as soon as cleared sites can suitably be made available. Redevelopment for portions of the site in the vicinity of the El line must of course, wait for removal and recovery of this right-of-way.

In addition to the units on the R-3-3a site programmed under d3, approximately 120 to 150 units for married students are scheduled immediately north of Oak Street on parcels P-3 and 3a. These would be financed, according to our understanding, under the HHFA College Housing program. Present indications are that the redevelopment of this site and its reconstruction in housing use would proceed promptly -- probably before any of the renewal housing sites would be ready to market. Together with the existing Posner Hall for students and nurses, located on the east side of Harrison at Oak, the married student's housing would help create a residential environment in this section of the project area.

3. General Market Offering (R-4-5-6-7). The remaining residential parcels contain a total of approximately 155,000 square feet, approximately 3.5 acres. A combination of high-rise towers, 20 or more stories in height and low-rise units are proposed for sites R-4 and R-5. On parcels R-6 and R-7, walk-up townhouse units are projected as a buffer for Bay Village along Charles extended. On this basis, a total of some 500 to 600 units in all might be provided here -- an average density of 150 to 200 units per acre.

As part of this high-density, high-rise plan, it has also been proposed that a platform be built at the elevation of the upper end of the site, creating a new plaza level for the residential structures. Beneath the plaza, as the site drops toward the Turnpike, auto parking decks are planned. These could provide necessary off-street parking for the apartments as well as long-term spaces for medical center needs.

This high-rise offering should be developed as a minimum type 220 with a non-profit sponsor; or alternatively, under the 221d4 program. In either of these two programs, monthly room rents in the \$30-\$35 range should be the target. These rental figures are intended to include all utilities with the exception of electricity and exclusive of the additional cost for off-street parking -- probably in the \$20-\$25 per space per month range. The need for residential parking would be hedged by the potential parking demand generated at the medical center as well as other nearby facilities.

This offering should emphasize studio and one bedroom units -- especially in the high-rise structure. Within the indicated room rent range, the studio units might average \$115 to \$125 per month and the one's might run in the \$140 to \$150 range. The spread in rents between floors might place the total building range for studios at \$100-\$150 and one's at \$130-\$180. Such an offering would be similar in its economic characteristics to the Charlesbank development at Huntington Avenue across from Peter Bent Brigham Hospital. Somewhat higher in rent range than the d3's proposed for other parts of the project, these 220's would, in a sense, upgrade the project.

We would recommend that this development occur relatively late in project phasing. Appropriate for example, would be a schedule so that the beginning of apartment leasing would follow readjustment of streets and circulation routes; removal and relocation of the rapid transit line; beginning of construction on the proposed new elementary school; completion of the public square area and related commercial facilities; as well as beginning of actual occupancy in the proposed d3 developments.

Even apart from beginning the first phase, total development proposed here should be staged over a period of years. We believe that a leasing program carrying approximately three years

from the initial marketing phase would be appropriate. Specifically, a 600-unit development should be staged to reach the market in approximately 200 unit increments over a three year period.

An alternative program for the development of these residential parcels would be to continue the d3 program begun earlier on parcels R-1 through R-3. We would recommend this approach as desirable, should the platform costs or construction of the elevator units prove so prohibitive as to miss the previously recommended rent range by a significant margin.

* * *

To recapitulate, the overall residential program recommended for South Cove can be summarized in tabular form as follows:

<u>Parcel</u>	<u>Unit Type</u>	<u>Total Units</u>	<u>Tenure</u>	<u>Financial Program</u>	<u>Stage and Sequence</u>
R-1-2-2a (Chinese Community)	Walk-up and Medium-rise units	150	Rental or possible cond.	221d3	#1A: 100 Units; #1B 50 units
R-3-3a (General Market)	Walk-up and Medium-rise units	100	Rental	221d3	#2: 100 Units
R-4-5-6-6a-7-7a-7b (General Market)	Walk-up and high- rise towers	600	Rental & possible cond.	Non-profit sponsor; minimum price 220 or 221d4; rental or cond.	#3A: 20- #3B: 200 #3C: 200

Markets for Housing

In the paragraphs which follow, basic market support for the 250 d3 units proposed in South Cove and the 600 minimum 220's or 221d4 units is analyzed. Subsequently, specialized markets available to these proposed units -- unique to a degree in South Cove -- are evaluated. The special markets include the downtown walk-to-work market; the Chinese community market; and medical center demand.

221d3 Markets

The scale of d3 market potentials can be established by determining the number of households by size groups with incomes sufficiently high to support the required rental at which d3 housing can be produced; but below the maximum limit allowed under FHA formulas. By estimating annual rental unit "turnover" in these ranges, the number of eligible and financially able households who are actually "in the market" each year can also be established. Comparison of potential d3 families in the market and projected annual scale of Boston area d3 operations provides the backdrop against which market feasibility of South Cove's d3 proposal can be specifically evaluated.

This analysis is largely based on source data drawn from the Census of Housing conducted in 1960. There have of course, been changes in area patterns since that time. However these changes, following trends established during the late Fifties, make this procedure conservative by tending to understate the number of families currently in the income ranges examined. In the 1950-60 period for example, the critical income groups of interest -- generally in the \$5,000-\$10,000 per year income range -- were among the fastest growing income classes in the area. In view of the conservative results and the availability of Census materials on a comprehensive basis, these data were used in this analysis.

The income spread of households eligible and able to carry below-market rental housing in metropolitan Boston -- by size of household -- can be seen in the following tabulation:

Table 3. ELIGIBLE HOUSEHOLDS, BELOW-MARKET RENTAL HOUSING, METROPOLITAN BOSTON

<u>Size of Household</u>	<u>Needed Unit Size</u>	<u>Minimum Income for Economic Rent</u> ^{1/}	<u>Below-Market Maximum Income</u> ^{2/}
Two persons	1 bedroom	\$5,100	\$ 6,550
3-4 persons	2 bedrooms	\$5,700	\$ 7,700
5-6 persons	3 bedrooms	\$6,600	\$ 8,850
7 or more persons	4 bedrooms	\$7,200	\$10,000

1/ Based on expected shelter budgets by bedroom count as follows:

- 1 bedroom: \$ 75 per month plus \$10 est. util. or \$5,100 minimum
- 2 bedroom: \$ 85 per month plus \$10 est. util. or \$5,700 minimum
- 3 bedroom: \$ 95 per month plus \$15 est. util. or \$6,600 minimum
- 4 bedroom: \$105 per month plus \$15 est. util. or \$7,200 minimum

2/ Based on FHA schedule per October 1, 1964

Analysis of income patterns among Boston rental households within incomes bracketed as in Table 3 above, shows that the total d3 market potential at present would be at least 55,000 households. The heaviest concentration of these eligible families by a wide margin are in the middle-size ranges with three or four persons in each household. Two-person households follow next in order of demand potential with many of these smaller families falling in both younger and older age brackets.

Specifically, distribution by size and income range of the eligible Boston families is as follows:

Table 4. ELIGIBLE HOUSEHOLDS, 221d3 PROGRAM, BOSTON AREA

<u>Annual Income Range</u>	<u>Household Size</u>	<u>Needed Unit Size</u>	<u>Number of Eligible Households</u>
\$5,100 - \$6,550	2 persons	1 bedroom	18,500
\$5,700 - \$7,700	3-4 persons	2 bedrooms	29,500
\$6,600 - \$8,850	5 persons	3 bedrooms	5,300
\$7,200 - \$8,850	6 persons	4 bedrooms	1,700
TOTAL ELIGIBLE:			55,000

Turnover Patterns. Even apart from population, household and dwelling unit gains, transfers among existing housing units in the area represent a major support factor in the area housing market. In Boston, turnover among both renter and owner units has been substantial -- although somewhat lower than in many other parts of the nation. There were more than 77,000 "move-ins" in the year 1959 among rental units alone. Total move-ins in 1959 -- including ownership units -- was 106,000.

The tabulation immediately below summarizes move-in trends for recent years in the Boston area.

Table 5. YEAR MOVED INTO RESIDENCE, METROPOLITAN BOSTON

	Number of Units		
	Owner Occ.	Renter Occ.	Total
1959 (Adjusted) ^{1/}	28,604	77,260	105,864
1958	26,297	46,354	72,651
1957	24,563	35,759	60,322
1954-1956	72,954	65,379	138,333
1950-1953	66,927	41,857	108,784
1940-1949	82,639	44,809	127,448
1939 or earlier	93,610	36,991	130,601
Total	395,594	348,409	744,003

^{1/} Census data as reported covers all of 1959 and up to March 1960. The 1959 figures above have been adjusted to a 12-month total.

Precise measurements of turnover -- especially among rental units -- would rely on frequent surveys to avoid distortions resulting from multiple moves during the course of time. The 1959 move-in data shown above -- which were recorded as of April, 1960 -- are most indicative of the local market turnover in recent years. The approximately 20 percent move-in rate among area rental units (77,000 as against 368,000 for the total renter-occupied inventory in the area) is at the lower end of "normal" turnover ranges in metropolitan markets, according to our experience. For the purposes of this analysis however, we have conservatively assumed that this same annual turnover rate of approximately 20 percent among rental units will continue in the Boston area during the coming period.

Applying the 20 percent overall market rate to the generally more transient middle and lower-middle income sectors, we estimate that approximately 11,000 rental households in the eligible income ranges would actually be in the market each year.

Boston d3 Program. At present, according to our information, the total Boston 221d3 program involves some 8,700 units which have been programmed for the five year period from 1964 through 1968. On an annual basis, this would represent average area construction of roughly 1,700 units -- should all of these units be successfully placed in production within the indicated time span.

Specifically included in this d3 total are the following, based on our information:

Table 6. ESTIMATED 221d3 PRODUCTION, BOSTON AREA, 1964-68

	<u>Location</u>	<u>Number of Units</u>
1.	Washington Park (Partially completed and 50 percent firmly programmed)	1,500
2.	Castle Square	500
3.	Charlestown	2,200
4.	South End (Primarily in Lower Roxbury area)	2,500
5.	Roxbury (Including Columbia Point)	1,500
6.	Other	<u>500</u>
	TOTAL	8,700

The annual pace of d3 activity indicated for the area at 1,700 units per annum during the coming period, represents only about 15 percent of the total potential available in the area within appropriate income ranges. To successfully absorb the projected d3 offerings -- putting it another way -- they must attract approximately one in seven of area families expected to be in the market among the eligible income ranges. Based on the conservative procedures used in calculating d3 market potentials, the highly competitive characteristics and advantages of the d3 offerings in relation to alternative housing choices for this income level, we believe that projected absorption figures should be readily achieved.

This is not to say that all d3 offerings in the area would be automatically assured of success in the period ahead, despite the favorable potential indicated. Suitable locations, attractive environments, true market "values" rather than simply cheap rents will be increasingly demanded by the potential d3 renter as increasing numbers of these units are placed on the market. Over time of course, maintenance and tenant service factors in these developments should also become an important competitive consideration.

The early d3 offerings in Boston have been well accepted up to the present time, clearly supporting the strong potential shown by the previous calculations. At the Marksdale and Charlambe developments in Washington Park, containing respectively 87 and approximately 100 units, the response was exceptionally strong. Our information is that 400 applications have been received at Marksdale. At Charlambe a total of 900 applications were received. Rents in both of these developments run generally in the \$75 to \$105 range and slightly higher.

South Cove d3 Offering. A total of 250 units are proposed for South Cove under the below-market program. Although precise timing for all the units cannot definitely be set at this time, perhaps all but 50-100 would be built in the pre-1968 period and before relocation of the Forest Hills elevated line. The remaining 50-100 would probably reach the market within the two-year period following. Accordingly, the actual pace for offering these d3 units would be modest. Even considering the programmed 500 below-market units in Castle Square, the total d3 offerings in this general vicinity would be limited -- especially in relation to annual potentials.

In the face of the modest "share" of total Boston potential sought by the present d3 program, the South Cove area enjoys an especially strategic location, high degree of accessibility and proximity to a unique combination of specialty markets -- both large and small. The South Cove area and, to a lesser extent, Castle Square are virtually without competition in terms of their accessibility to these specialty markets as well as to the overall central area transportation network.

The combination of advantages available at South Cove in the context of the strong market support for the projected d3 offerings in Boston in the period ahead are highly favorable for the proposed 250 units. We believe that the South Cove d3 program, staged as outlined previously, can be successfully marketed here.

220 Markets

A total of some 600 units are proposed for a 3.6 acre area contained in parcels R-4, R-5, R-6 and R-7. These would be principally in high-rise tower structures although some units in walk-up buildings would be included. Designed for staged development over a period of approximately three years at the rate of some 200 or so units per stage, these units are proposed for finance as a minimum 220 development with non-profit sponsor, or a 221d4. In either case the rental objective would be for monthly room rents averaging in the low \$30 range including heat and hot water but excluding electricity; and with low room count units in the zero and one bedroom class. Higher room count apartments -- two and three bedrooms -- would be located in the walk-ups.

Procedures similar to those used in analyzing potentials for d3 offerings above were applied to this 220 proposal. If rentals similar to the Section 220 Charlesbank units were achieved, the figures for this development might be as follows:

<u>Unit Type</u>	<u>Monthly Rental</u>
Studio	\$100 - \$140
One Bedroom	\$140 - \$170

Necessary minimum incomes for one and two person households would be \$6,000 per year for the bottom studio units and approximately \$8,000 per year for the bottom ones. Because there are no maximum income limits under this program, the potential for attracting upper income groups is limited only by consumer choice and competitive factors rather than statute or administrative regulation. Effectively however -- based on rent paying patterns among Boston's higher income renter families -- we expect virtually no draw into the \$10,000-plus group for studios and only to a slightly greater extent, would there be a one bedroom draw here.

Our calculations show on a most conservative basis, that at least 13,000 renter households in the Boston area are able and potentially willing to pay rents such as are proposed in this South Cove development. At an estimated 20 percent turnover rate in the area, the annual number of households "in the market" among those eligible would be some 2,500.

Against this total market potential -- completely discounting any area growth factors and minimizing the possibility of tapping new markets here -- the prospective 200-unit per year South Cove offering would attempt to "claim" only eight percent -- or about one in 12 households estimated in the market -- in order to achieve substantial rental success. Although this is only half as great a market "share" as in the d3 units, the market is substantially more competitive at this level with many new conventional deals at a variety of locations offering comparable rents. Attractively developed, suitably merchandised and planned, we believe that such an offering as is proposed in South Cove can be successfully leased within a reasonable period following completion in the "normal" Boston market for Section 220 units.

Another conservative element in the foregoing analysis is the possible and probable pattern of doubling or "shared" quarters -- especially in light of specialty markets available to this facility -- and its impact on rentability. The analysis took into account only those household units based on family groupings -- rather than unrelated individuals who might join together to share a rental unit.

This potential in South Cove for the proposed offering has in part been reflected in the favorable rental history at Charlesbank Apartments. Serving a market similar in many ways to the South Cove with T-NEMC, the Charlesbank drew many single persons and small families, some of whom were employed at adjacent Peter Bent Brigham Hospital. Many Charlesbank occupancies, according to our information, are based on individuals sharing apartments.

The rental history at Charlesbank has been excellent. Opened approximately two years ago, the rent-up pace was satisfactory, we understand. Since completion of the initial leasing program, virtually full occupancy has been maintained. At the time of our field survey, no units of any type were immediately available. One bedroom units -- accounting for only one-third of the total in this building -- were wait listed.

Special Markets

The analysis above discounted several key market factors which can be expected to give specific impetus to South Cove residential offerings in the period ahead. Included are four specific items -- area-wide growth patterns; close-in downtown markets; Chinese community; and medical center demand. Comments on each of these special markets and their bearing on South Cove are set forth in the paragraphs which follow below.

Growth Factors. The pattern of population and dwelling unit gains in the Boston area has been steady to upward in the post-1960 years relative to performance in the Fifties. During the Fifties, metropolitan Boston population increased by less than 200,000 persons, going from approximately 2.4 million to approximately 2.6 million. This represented a decade rate of gain of 7.4 percent -- substantially less than one percent per annum. Although firmly established as one of the nation's largest metropolitan areas, Boston's rate of gain also placed it among the slowest growing in the nation.

During the same period, the area's housing supply was expanding at an average annual rate of approximately 15,300 units per year. Two-thirds of this total -- slightly more than 10,000 units per year -- were being added by new construction. This represented an annual rate of gain against existing housing stock at the beginning of the decade of 2.2 percent, somewhat faster than the gains for population. This differential is attributable to replacement market factors which have been operating in the area.

Since 1960, the area's population has been expanding at about the same pace. Estimates of Greater Boston's current population by the U.S. Census Bureau covering a three and one-fourth year period to July, 1963 -- showed that the area's population has increased by 20,000 each year. On an annual basis this represents a percentage gain of less than one point -- as was the case in the past decade.

These continuing population gains, although still relatively slow in contrast to many metropolitan areas, together with replacement requirements, have supported an accelerating housing construction pace in the area. The record of building permits for the metropolitan area directly reflect this pattern.

Since 1960 the record of authorizations has averaged approximately 14,000 units on an annual basis. This figure is generally comparable with the record of 10,000 on the average in the Fifties. The overwhelming proportion of the gains in pace have been in the multi-family category. Although up somewhat, single family construction has held relatively steady. In 1964, based on preliminary data, multi-family authorizations in the area accounted for roughly two-thirds of total permits. In 1963, this share was slightly less than 50 percent. In 1960 by contrast, multi-family work only accounted for some 20 percent of total authorizations. The share of the city in the metropolitan total has also been increasing with the level of multi-family activity during the past five years.

These data are shown in greater detail by year, location and structure type for the 1960-64 period in the table on the following page.

Table 7. PRIVATE AND PUBLIC HOUSING UNITS AUTHORIZED, METRO-
POLITAN BOSTON, BY TYPE HOUSING UNIT, 1960-1964

	Private Units			Public Housing	Total All Units
	One Family	2-4 Family	5 or more Family		
1960					
Boston City	383	81	624	86	1,174
Rest of Metro	7,120	412	1,074	275	8,881
Total Area	7,503	493	1,698	361	10,055
1961					
Boston City	339	80	1,023	298	1,740
Rest of Metro	6,691	349	3,299	417	10,756
Total Area	7,030	429	4,322	715	12,496
1962					
Boston City	383	91	1,819	96	2,389
Rest of Metro	6,226	640	4,072	514	11,452
Total Area	6,609	731	5,891	610	13,841
1963					
Boston City	358	411	3,221	00	3,990
Rest of Metro	5,975	507	3,683	34	10,199
Total Area	6,333	918	6,904	34	14,189
1964 ^{1/}					
Boston City	778	717	8,279	82	9,856
Rest of Metro	5,139	393	3,948	00	9,480
Total Area	5,917	1,110	12,227	82	19,336
1960-64 Average					
Boston City	448	276	2,993	112	3,830
Rest of Metro	6,230	460	3,215	248	10,153
Total Area	6,678	736	6,208	360	13,983

^{1/} Compiled from preliminary monthly data.

The area's housing production has reached sharp peaks in recent years, especially during 1963 and 1964. This acceleration has been supported however, by adequate market response in most instances, based on continued population growth as well as replacement needs. Despite the accelerated construction in the area, recent surveys by Boston Building Owners and Managers Association, official postal vacancy checks and occupancy analyses of FHA-insured multi-family projects all show that the rental market in Boston has remained firm, especially in contrast to conditions in the wake of similar expansions elsewhere in the nation. In addition, our field surveys of key apartment offerings in central and close-in Boston show that new offerings continue to be well accepted at a satisfactory leasing pace in most instances and are maintaining suitably high occupancy rates following completion.

Close-in Markets. One of the key props in the central area housing market is walk-to-work demand. The strength and success of this demand is directly dependent on the scale and characteristics of the downtown work force. The last complete survey of this work force indicated that the total number employed was more than 200,000, with heavy representation in the white collar fields. Approximately 20 percent of the metropolitan work force or one in five area-wide workers are located in the core area, based on these data. This degree of concentration makes Boston one of the more highly centralized cities in the U.S.

In recent years -- based on new central area office expansions as well as gains in other lines -- the downtown work force has been increasing in total size on a net basis. This was the case even though some sectors of downtown activity have been declining -- notably in manufacturing and distribution. A comprehensive study of the long-term outlook for central area employment has indicated that the downtown employment total can be expected to expand by more than 1,500 net workers per year in the coming period. Another 1,000 per year will be added on a net basis in the adjacent, close-in sections of the core.

The downtown worker is strongly rental-oriented. Typical employees in this group are white collar workers, clerical personnel and junior executives. Many of these consider convenience and prestige as a key factor in residential location and living choice. This would be especially true for single persons as well as younger and older couples without children.

In the face of strong, existing downtown walk-to-work demand -- already supporting thousands of existing units in the nearby areas -- and strong expansion opportunities indicated in the future, virtually no close-in sites are available for middle-income offerings to serve this market. South Cove; Castle Square; together with limited spots in the Waterfront; possibly some Back Bay locations, provide the only opportunities for this type of development. The South Cove units would thus have a strong locational

advantage in serving this central area walk-to-work market in relation to any but the limited offerings on the sites mentioned.

Chinese Community. A specific survey of specialized housing needs for the Chinese community is presently underway by the Chinese Consolidated Benevolent Association. Pending results from this survey however, the indicated needs and potential demand of the Chinese community for new, middle-income rental housing are strong. The cohesiveness of the Chinese community; the record of sizable displacement from South Cove and central residential areas by Central Artery construction; coupled with the strong desire reported by knowledgeable persons of many Chinese families to locate within this area where suitable housing available all support this outlook.

There is presently a strong concentration in this section of the metropolitan area among members of the Boston Chinese community. In a metropolitan total of approximately 6,000 Chinese individuals, we estimate that some 2,500 or slightly over 40 percent, are residents in South Cove; adjacent South End sections; the Central Business Area; and other nearby locations. Of the 6,000 Chinese in metropolitan Boston, approximately 3,600 or 60 percent live within the City. Against the city total, nearly 70 percent live in South Cove and immediately adjacent areas.

Even apart from market potentials based on the return of already displaced Chinese families, many of those presently living here could, in our opinion, be attracted to new middle-income housing provided within the Chinese community. Median family incomes for Boston's Chinese population, although not substantial, are estimated to be at levels only slightly lower than the median for the entire area population. Similarly, although the basic problem of housing the Chinese elderly is substantial, it is no greater than for other population segments. The available data show that the proportion of 65 and over individuals among the Chinese population is slightly lower than the percentage for total metropolitan population.

In our judgment, a housing development sponsored by a recognized group such as the Benevolent Association would exert strong pull among Chinese families to live in this area, giving a South Cove middle-income offering particular impact and potential support in the Chinese market.

Medical Center Demand. The Tufts-New England Medical Center is already a well established, sizeable facility at the present time. The consolidated educational-hospital complex has its main components drawn from the Tufts Medical-Dental schools; Boston dispensary; Pratt Clinic Rehabilitation Institute; and Floating Hospital. Specifically, the scale of T-NEMC is indexed by its:

- 365 existing beds
- Nearly 75,000 out-patient visits to medical and dental facilities.
- Approximately 1,700 students in under-graduate; graduate and post graduate classes; nursing; and various health service categories.
- Present total staff -- exclusive of students -- of approximately 3,000 persons.

The T-NEMC has been undergoing substantial expansion in recent years. The program for future expansion is even more ambitious. Plans for a 20-year expansion program have recently been drawn in preliminary form. They show a development in four stages, with approximately \$70 million of new construction at the center during the period.

The total number of hospital beds is projected to more than double, reaching a 1985 level of nearly 1,000. The out-patient visits per year should nearly triple, to approach a 1985 figure of approximately 210,000 per year. Finally, another 750 students are expected for the educational programs in all categories of medical, dental and allied health professions.

In 1961, a comprehensive survey of medical center personnel was undertaken in an attempt to establish need and demand for housing. A total of approximately 2,100 persons replied to a questionnaire, distributed throughout the center. Approximately half indicated interest in new accommodations which might be provided in the immediate vicinity of the center at various price levels. Working within the framework of these responses, a current demand for nearly 300 units in economic rent ranges from medical center sources is indicated. This demand is for units in the studio; one; and two bedroom classes with a lesser demand for three and four bedrooms. Projected rent paying capability would run from approximately \$80 to \$175 and slightly higher in a limited number of instances.

The calculation of current effective demand at 300 units completely eliminates married students -- proposed to be handled on a different basis and discussed in further detail below. It further discounts all contingent positive responses by a factor of 80 percent -- that is only one of five responses was assumed to provide an actual potential for a medical center unit. In addition, substantial doubling up among all single-person respondents was assumed. This was particularly true among the intern, resident and fellow groups; nurses; clerical and service staff; as well as single students. If single students were discounted completely, the projected effective demand for approximately 300 units at the present time would decline to roughly 200 units. These figures of course are based only on current levels of

personnel at the medical center. Future expansions -- even during the coming several years -- should substantially supplement the indicated potential.

Note on Married Student Housing. At the present time there are approximately 200 married students in the medical center program. About 100 of these are involved in the medical school and the remaining ones are in the dental school. The overwhelming majority of these students have expressed a desire to live in housing close to the medical center. Some of these families now have children. To conservatively evaluate total potential demand for married students housing, enrollment was discounted by 60 percent based on problems of prior housing commitments; preferences for suburban rather than inner urban area locations for family living; as well as a variety of other factors.

In addition to the married student load, there are also approximately 115 interns and residents presently at the center. Discounting this demand to the same degree and taking the specific interest of Boston University married Med students into consideration -- located in the city hospital area, minutes to the south of the T-NEMC facilities -- the potential demand for married students housing in South Cove at present can be summarized as follows:

<u>Married Students Demand Source</u>	<u>Number of Units</u>
Tufts and BU Medical School	50
Tufts Dental School	35
Tufts & BU interns; residents and fellows	45
Total	<u>130</u>

This demand is proposed to be met in the planned 120-150 unit married student housing facility on P-3 and 3a to be financed under HHFA's College Student Housing Program.

Commercial Development

A total of seven parcels are proposed for commercial purposes in the South Cove project. Located generally in the north and westerly sectors of the project area, the seven parcels contain aggregate ground area of roughly 156,000 square feet, or approximately 3.6 acres.

In addition to parcels specifically designated for commercial purposes, parts of the area occupied by T-NEMC facilities would be used for commercial activities related to medical center operations as well as for general commercial purposes. In Parcel P-7, as an example, upper story areas will be occupied by general commercial and office activities, and first floor areas by retail activities.

Although some of these may be allied to the medical center operations, others would be run-of-the-market operations, according to our information. Over time, as medical center activities expand, these unrelated uses would be displaced. Although not directly concerned in this report with market aspects of medical center area used on this "mixed" basis, availability of this area would have an indirect impact on commercial uses proposed elsewhere in the project -- particularly along the Stuart Street frontages. This point will be discussed in further detail below.

The seven commercial parcels proposed for South Cove can be best analyzed in three major groups. These are as follows:

<u>Parcel Number</u>	<u>Market Orientation</u>	<u>Approximate Size</u>	
		<u>Sq. Ft.</u>	<u>Acres</u>
1. C-1; C-2	Central plaza, community service and theatre functions	25,000	0.6
2a.C-3; C-3a; C-3b	CBD fringe and parking	75,000	1.7
b. C-4; C-5; C-6	CBD fringe and parking	29,008	0.7
3. C-7	Park square and Back Bay office and commercial	26,841	0.6

Recommended Programs and Market Factors

Specific developments are anticipated for each of the three key groups of commercial parcels proposed under the plan. Chief characteristics and market factors affecting the recommended re-uses are set forth immediately below. The nature and extent of special market support for these proposals is set forth in a subsequent section.

Central Plaza. Proposed here is a small commercial complex on 25,000 square feet of ground intended to meet three specific needs of the project area. These are:

1. Charles Playhouse Expansion. The existing Charles Playhouse is located immediately adjacent to the 13,000 square foot parcel C-2. This resident theatre company -- an established institution in the greater Boston community and a valuable asset in the central area -- is proposing to expand, upgrade and modernize its present facilities, tying into the contiguous C-2 parcel. Frontage would be provided on new Charles Street extended as well as the new public plaza.
2. Community Retail Sales and Services. The new residential units proposed, together with the existing units in the area to remain establishes a sizeable South Cove residential community which will require more extensive retail and service units than presently serve the area. Although a number of such businesses are now located in scattered locations in the project, the creation of this new commercial focusing on the central plaza will provide strong potential to conveniently centralize these activities and, together with other activities fronting on the square, help develop a visual "heart" for the project.
3. General Commercial Facilities. Within the allowable building envelope for this site -- established by a maximum FAR of eight -- a variety of commercial activities could be located. These could be oriented to other project activities as well as to the broader fringe area uses. Particularly strong potentials would be in restaurant facilities relating to the immediately surrounding residential community and medical center but also to the entertainment facilities nearby. Specialized office uses, allied to the medical center could also be appropriately located here on a limited scale. Finally, "loft" type units on upper stories offer additional possibilities.

Downtown Fringe and Parking Uses. Four parcels in two separate groupings are proposed along the Stuart Street boundary of the project immediately adjacent to the Central Business District. Parcel C-3-a-b with 75,000 square feet, corners on Stuart and Charles Street Extended. Parcel C-4-5-6 with approximately 29,000 square feet is at Stuart and Tremont, one of the most prominent corners in the project area.

The parcel C-4 through 6 grouping we understand, is almost entirely in a single ownership at present. Virtually no major improvements now stand on the property. Much of it is used for parking at surface with a sub-surface level as well. Taking for this parcel is included under the present plan, but is contingent on developing a suitable program -- to be implemented by present owners -- for its effective utilization. In either case however, a suitable use for this parcel is to be established, whether or not redeveloped in the technical sense, by BRA.

Although intensive, multiple uses for these commercial properties, including general occupancy office space, would appear to offer market and locational potentials, we do not recommend that these sites be developed for such purposes. This is not to say that limited general commercial uses drawing on all available market support factors in this area should not be allowed or encouraged within the limits of the maximum FAR of eight for this site. Availability of space in T-NEMC facilities for office uses associated with the project area, together with the extensive program for office construction within adjacent CBD and downtown project areas -- even apart from other renewal and private office construction elsewhere in the area -- can be expected to meet necessary market requirements in the near future. In fact, extensive development on this site could create competitive conditions in both South Cove and CBD projects in our judgment.

Location of these parcels with respect to South Cove as well as the Downtown would permit the development of off-street parking space supporting facilities in the adjacent areas. The specifics of this support are discussed in further detail in a subsequent section.

Park Square - Back Bay Commercial. The relocation of the Prudential offices into the new Back Bay center has left behind their former building at the corner of Columbus Avenue and Berkeley Street. Located on approximately 25,000 square feet of ground area, this parcel contains an existing structure in standard condition with 140,000 gross square feet of floor area. As in the case of parcels C-4 through 6, taking of this parcel is contingent upon the present owners working out a suitable program for re-use of the site and structure.

Preliminary indications are that the existing structure is economically adaptable for a number of potential uses. The convenient location of the site in relation to major activity sub-centers in Back Bay, including the new Prudential center; Park Square; as well as the south sections of the Central Business District has been further bolstered by the construction of the Mass Turnpike with its nearby Copley Interchange.

In our judgment, a variety of private office users requiring extensive, centrally located space at rates below the new building level could find a suitable location here. In addition, selected institutional and semi-public uses -- especially large space users -- could also be appropriately accommodated in this building. Selective renovation in direct response to specific tenant requirements appears to be the most satisfactory alternative for the utilization of this site and building under the South Cove plan.

Note on Staging and Timing. Constraints on staging and timing for redevelopment of the seven parcel commercial group in South Cove primarily result from project improvements and potential sponsor timing rather than general market conditions. Markets for CBD fringe parcels are substantially in being now -- although the further development of South Cove including the medical center facilities will of course, enhance these markets with passing time.

In the case of the contingent takings on parcels C-4-5-6, and C-7, negotiations with owner-sponsor groups will probably condition redevelopment timetables. Similarly, expansion of the Charles Playhouse on parcel C-2 will in part be a function of the theatre group's needs and capabilities as well as the Charles Street realignment, opening of the public plaza area and similar project improvement factors.

Only on parcel C-1 -- community services facilities -- should the market influence redevelopment scheduling to any significant degree in our judgment. The creation of satisfactory support markets as well as specific potential tenancies -- to be discussed further below -- will depend on project action elsewhere.

Special Market Supports

The key sources of special support for the proposed re-uses in South Cove are set forth below. These are in addition to the overall factors discussed above. In each case, the scale of the total market potential is substantial. In contrast, the extent of proposed commercial re-uses is modest. The outlook for marketability of project re-uses, in consequence, is strong in our judgment. Locational advantages and unique access to special sources of market support should give these uses a substantial competitive "edge" over other locations planned for similar purposes outside of the project area.

Community Services: Plaza Area. The retail and service activities proposed in the plaza area relate directly to many of the specialized and newly emerging markets located in the immediately surrounding South Cove vicinity. Key points underpinning the markets for Parcel C-1 with 12,000 square feet of ground area, can be summarized in the following listing:

1. Residential Neighborhood. A total of approximately 1,000 new dwelling units -- including married students housing -- are proposed for the project area. Together with the existing units to remain, more than 2,000 units following completion of the projected construction will be in the area immediately tributary to this location. The 10-12 shops and stores which might be accommodated at ground floor level in this commercial complex on the public plaza could serve a part of the everyday retail needs for this sizeable new neighborhood.
2. Medical Center Activities. The present personnel total in the medical center is already approximately 4,700 persons -- 3,000 staff and nearly 1,700 students. Substantial expansion for both of these categories is programmed for the medical center in the years ahead. These groups, although largely a "daytime" population, would provide a sizeable market and effective demand for a variety of commercial activities at the plaza center.
3. Adjacent Entertainment District. Major portions of the core area entertainment and restaurant complex are located within and immediately adjacent to South Cove. The plaza center proposed would directly relate selected restaurant facilities to the public open space and new Charles Playhouse proposed on parcel C-2.
4. Rapid Transit. The relocated Forest Hill elevated -- proposed in an underground tube through the project area -- is to be developed with a station stop located on the plaza. This transportation focus and interchange will generate support for such related commercial facilities as drug and sundry units; news, cigarette and magazine stands; gift shop; specialty foods; and personal services including beauty and barber shop, valet, etc.
5. Project Area Displacement. A substantial number of the existing business establishments presently located in South Cove will be displaced under the project plan. Only a fraction of these of course, are in business categories appropriate to a plaza location. However, we estimate that some 50 existing establishments of the 181

to be relocated could potentially find sites here and at the same time provide suitable services needed for the South Cove development as proposed. Limiting factors in actually relocating these businesses to the plaza site will be timing; economic, based on the costs of new space construction; and the relatively modest amount of space which will be available.

Fringe CBD and Parking. Three key sources of off-street parking demand affect development on South Cove sites. These include general CBD requirements, particularly in the south sections and especially for long term parkers; the medical center, and other South Cove facilities such as the entertainment and restaurant operations; general offices in the area; as well as the proposed University of Massachusetts operation to open in the near future at the existing Boston Gas Building on Berkeley and Stuart Streets. These are areawide demands of course, and would operate in addition to any new commercial or offices included in development on the parcels C-3 through C-6 themselves.

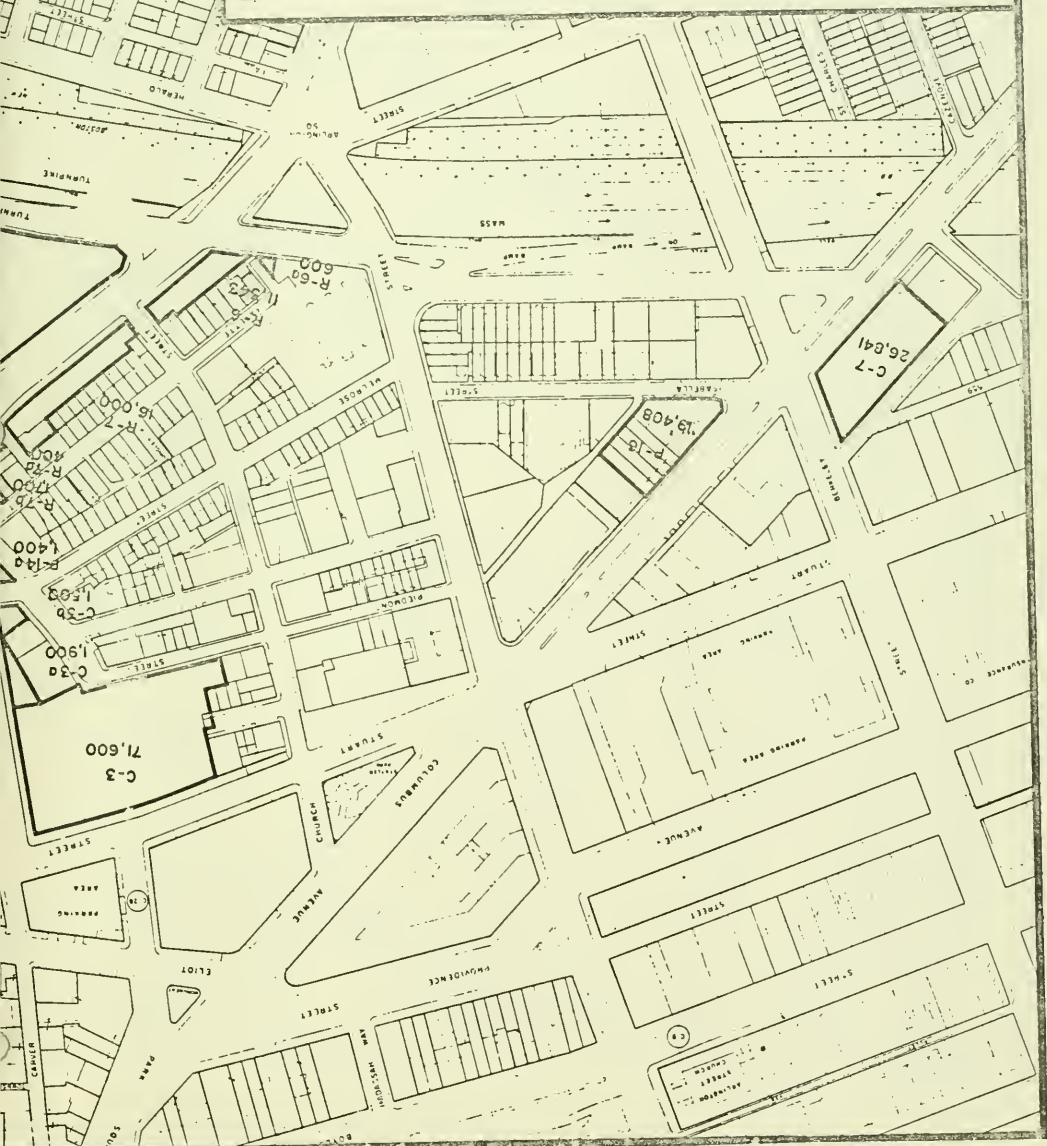
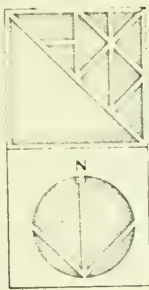
The requirements for medical center off-street parking have been estimated by the planning office at T-NEMC. These calculations -- based on a comprehensive survey of personnel, students and visitors; their travel habits; and auto utilization -- indicate a substantial total demand for off-street parking facilities in the area. The results show a current demand for 1,250 spaces at peak periods on a daily basis.

Because virtually all of the facilities now serving these needs will be replaced under the medical center expansion and the South Cove project plan, this present demand is also a future need. In addition however, to replacing present facilities, projected expansion of medical center operations carries with it -- according to T-NEMC figures -- a total 1985 parking requirement of more than 2,500 spaces.

No firm plan is now at hand according to our information, for the provision of these required spaces by the medical center or a constituent organization within the center. At issue of course, is what portion of the medical center need can economically be provided commercially in such locations as Stuart Street structures on parcels C-3 through C-6. Assuming the rate structure necessary to sustain this development could be set in suitable ranges to attract medical center markets, we believe it would be to the city's advantage, as the commercial operation would be fully tax-producing.

Parking requirements as discussed above are fully accounted and balanced with the existing and proposed new off-street facilities in a special report on off-street parking and transportation requirements in the South Cove area. This report, prepared by Barton-Ashman Associates, concludes that a deficit of some 1,500 off-street spaces is expected in the South Cove area under full development of the plan as proposed. This deficit is the result of a projected demand within the area for 6,000 offstreet spaces as against an indicated supply of 4,500 spaces.

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LAND UTILIZATION AND MARKETABILITY

South Cove Urban Renewal Project

Section C. Re-Use Values

In this section, preliminary re-use valuation ranges are developed on a unit square foot basis for each of the disposition parcels. These figures are intended as guidelines to assist in calculating net project costs. They do not substitute for a final valuation appraisal based on detailed features, restrictions and similar factors affecting specific potential for utilization for each of the parcels. Nor do they take into specific account transaction prices for comparable parcels elsewhere in this general area. They are however, based on general real estate sales experience in the city under related conditions.

South Cove disposition parcels, listed in order, for residential, commercial and public uses together with the development program and restrictions affecting them, are shown in the table which follows immediately below.

Table 8. DEVELOPMENT PROGRAM AND RESTRICTIONS, DISPOSITION
PARCELS, SOUTH COVE PROJECT

<u>Parcel Number</u>	<u>Permitted Uses</u>	<u>Maximum FAR</u>	<u>Intended Use</u>
Residential:			
R-1	Housing	8	Housing
R-2; R-2a	Housing	4	Housing
R-3; R-3a	Housing (Alt: Public or Institutional)	4	Housing
R-4	Housing	8	Housing
R-5	Housing	8	Housing
R-6; R-6a	Housing	4	Housing
R-7; R-7a; R-7b	Housing	4	Housing
Commercial:			
C-1; C-2	Commercial	8	Restaurants & Theatres; Retail
C-3; C-3a; C-3b	Commercial Including Parking	8	Parking; Retail & Office
C-4; C-5; C-6	(Contingent Taking)		Parking; Retail & Office
C-7	(Contingent Taking)		Offices
Public and Institutional:			
P-1	Semi-Public (Alt: Housing)	4	Community Center
P-2; P-2a	Institutional	4	Medical & Housing
P-3; P-3a	Housing & Institutional	4	Medical & Housing
P-4; P-4a	Housing & Institutional	4	Medical & Housing

(Table 8 Cont'd.)

Public and Institutional (Cont'd.)

P-5	Institutional	8	Medical & Commercial
P-6; P-7	Institutional	8	Medical & Commercial
P-8; P-9; P-10; P-11	Institutional	8	Medical & Commercial
P-12; P-12a; P-12b	Institutional	8	Technical High School
P-13	Public (Alt: Housing)	8	Elementary School
P-14; P-14a	Public Open Space	-	Public Open Space
P-15	Institutional	8	Church
P-16	Public	8	Fire Station

The preliminary estimates of square footage value ranges for the project's disposition parcels, taking into account the program and use basis; parcel location, size, shape and restrictions are set forth in Table 9 following.

Table 9. PRELIMINARY RE-USE VALUATIONS, SQUARE FOOT BASIS,
SOUTH COVE PROJECT

<u>Parcel Number</u>	<u>Basis</u>	<u>Square Foot Unit Price Range</u>	<u>Comments</u>
Residential:			
R-1	Minimum rental 220	\$1.20 - \$1.30	Walk-up & high-rise structures
R-2; R-2a	Minimum rental 221d3	0.20 - 0.30	Walk-up & medium rise elevator structures
R-3; R-3a	Minimum rental 220	0.80 - 0.90	Walk-up & high-rise structures; Access problems on Frontage Road
R-4	Minimum rental 220	1.35 - 1.55	(Walk-up & high-rise (tower structures; Assume (parking deck can be built (at reasonable cost as plaza (platform
R-5	Minimum rental 220	1.35 - 1.55	(
R-6; R-6a	Minimum price sale or cond.	0.60 - 0.90	(
R-7	Minimum price sale or cond.	0.60 - 0.90	(Townhouses or walk-up (structures
R-7a; R-7b	Minimum price sale or cond.	0.60 - 0.90	(
Commercial:			
C-1; C-2	Theatre; Retail Sales & Services; Restaurants; Ltd. offices	\$5.00 - \$7.00	No parking; 100% coverage; Avg. 3-5 story & Basement height
C-3	(Parking Dominant Use; (Some offices & ground	8.00 - 10.00	Build to full FAR 8
C-3a; C-3b	(floor retail	1.50 - 2.50	Size & Shape problems

(Table 9 Cont'd.)

<u>Parcel Number</u>	<u>Basis</u>	<u>Square Foot Unit Price Range</u>	<u>Comments</u>
C-4; C-5; C-6	(Contingent Taking)		-
C-7	(Contingent Taking)		-
Public & Institutional:			
P-1	Minimum rental 220	\$1.20 - \$1.30	-
P-2; P-2a	Minimum rental 220	1.20 - 1.30	-
P-3	Minimum rental 220	1.20 - 1.30	-
P-3a	Minimum rental 220	0.45 - 0.55	Size Problems
P-4; P-4a	Retail & Commercial	1.50 - 2.50	-
P-5	Retail & Commercial	1.00 - 2.00	-
P-6	(Retail & Commercial; (Offices & Parking (5.00 - 7.00	-
P-7	(5.00 - 7.00	Depth of site problem
P-8; P-9; P-10; P-11	Retail & Commercial; Offices & Parking	0.50 - 1.00	Size, shape & frontage problems
P-12; P-12a; P-12b	Minimum rental 220	0.75 - 1.00	Size & Shape problems
P-13	Minimum rental 220	0.90 - 1.20	-
P-14; P-14a	Minimum rental 220	0.75 - 1.00	Shape problem & MBTA R/W
P-15	Minimum rental 220	0.75 - 1.00	Shape problem & MBTA R/W
P-16	Retail & Commercial; Offices & Parking	2.00 - 4.00	-

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